

Agency: Commerce, Community and Economic Development**Grants to Named Recipients (AS 37.05.316)****Grant Recipient: Marine Exchange of Alaska****Federal Tax ID: 92-0173630****Project Title:****Project Type:** Information Systems and Technology

Marine Exchange of Alaska - Vessel Tracking System Upgrades

State Funding Requested: \$450,000**House District: Statewide (1-40)**

One-Time Need

Brief Project Description:

Expand the Alaska Vessel Tracking System that provides for safety and maritime security, efficiency and environmental protection.

Funding Plan:**Total Cost of Project: \$1,280,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Federal Funds			\$830,000	2010		
Total			\$830,000			

Detailed Project Description and Justification:

Funding is requested to expand the number of AIS (Automated Identification System) vessel tracking system receiving stations at strategic locations along the Aleutian Islands and in the Arctic regions of Alaska to aid maritime safety and environmental protection. The expanded system will receive and process vessels' AIS transponder signals to track and monitor the already high volume of maritime traffic that transits the waters around the Aleutian Islands and the expanding maritime operations in the Arctic. This tracking system will assess the risks to the marine environment presented by transiting vessels, provide early notification of potential marine casualties and aid emergency response by locating vessels that may render assistance.

The State of Alaska is host to thousands of US and international vessels every year, with container ships from Asia and other vessels transiting the waters around the Aleutian Islands to the benefit of the US economy; and more recently, throughout the Arctic and sub-Arctic region as Arctic ice has given way to opportunities for resource extraction, fishing, tourism and exploration. This high volume of maritime traffic also increases the risk of maritime accidents that risk life and property and can cause harm to the surrounding environment. This project would provide Federal and state agencies tasked with ensuring the safety of mariners and protection of the environment in this critical part of the US with the tools they need to do their job and at the lowest available cost to the US taxpayer. Not only that, these capabilities are available now, and can be constructed as quickly as funding is made available, unlike other, higher cost alternatives that are realistically several years from being a reality. In the meantime, maritime traffic will continue to grow in Alaska, and the government will not have the tools it needs to ensure safe, secure and environmentally responsible maritime operations in these regions of the US.

Project Timeline:

FY 2009-2010

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Marine Exchange of Alaska

Grant Recipient Contact Information:

Name:	Captain Ed Page
Address:	1000 Harbor Way Juneau, AK 99801
Phone Number:	463-2607
Email:	edpage@mxak.org

Has this project been through a public review process at the local level and is it a community priority? ☒ Yes ☐ No

State of Alaska Capital Funds Request

Marine Exchange of Alaska's Vessel Tracking System

April 1, 2009

The non-profit Marine Exchange of Alaska requests \$450k in State Capital Funds from the Cruise Ship Head Tax Revenues to support the expansion of the vessel tracking system used to support cruise ships and other vessels operating in Alaska waters.

The cruise ship head tax revenues are authorized by the Harbors Appropriation Act of 1884, as Amended, in cases where:

"(2) reasonable fees charged on a fair and equitable basis that—

(A) are used solely to pay the cost of a service to the vessel or water craft;

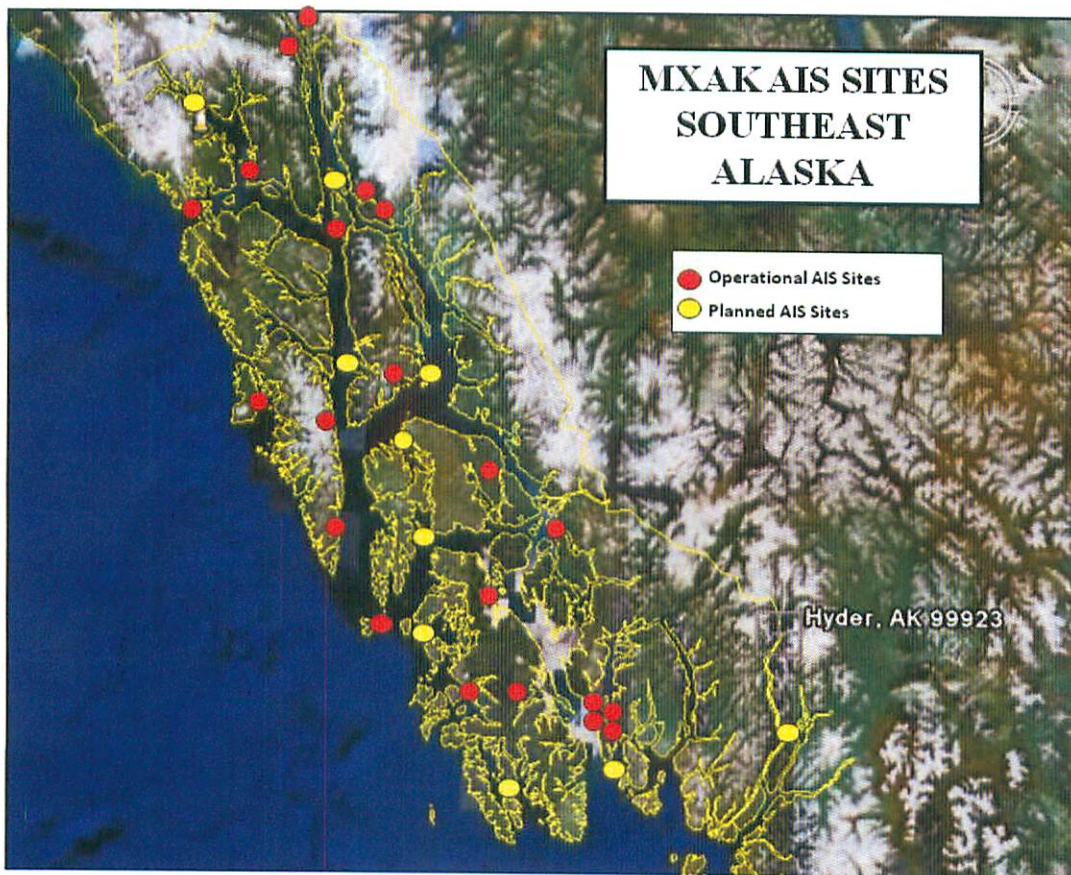
(B) enhance the safety and efficiency of interstate and foreign commerce; and

(C) do not impose more than a small burden on interstate or foreign commerce and to pay for the communications and operating costs."

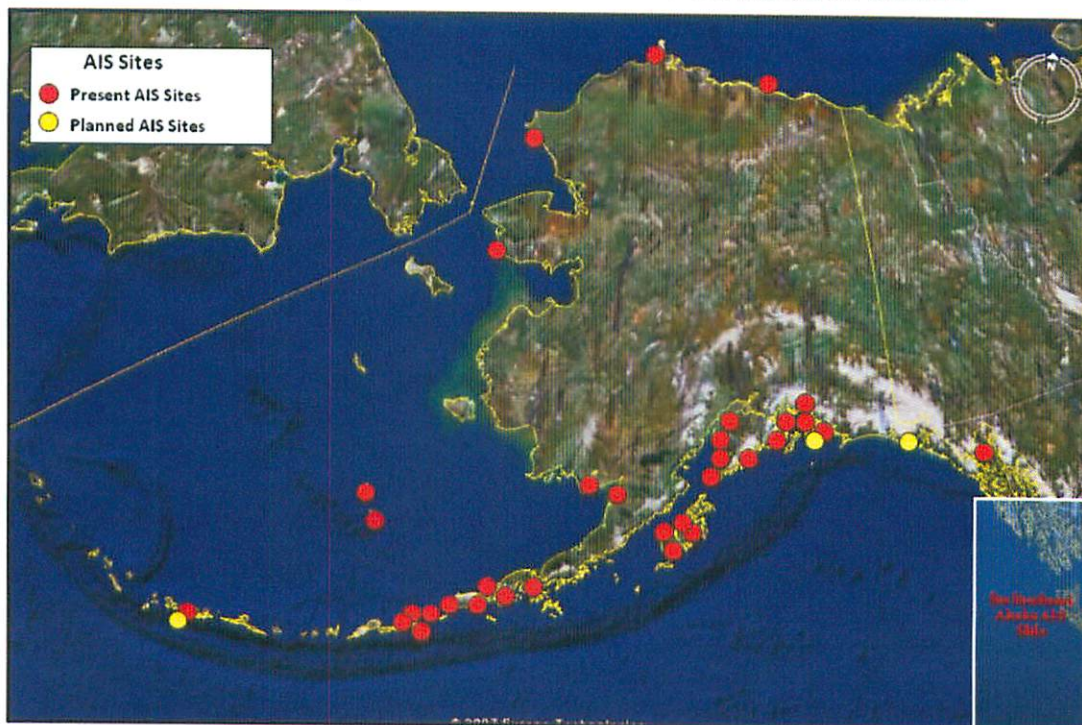
We submit the funds requested for the Marine Exchange's vessel tracking system meets paragraph b above.

Since 2001, over \$7 million dollars in State, Coast Guard and marine industry funds have been allocated to build a vessel tracking system operated by the Marine Exchange of Alaska to provide a safety and security net for cruise ships as well as aid environmental monitoring, emergency response and the efficiency of maritime operations. The Marine Exchange Vessel Tracking System is comprised of 62 AIS (Automatic Identification System) receiving sites extending from Barrow to Ketchikan, however, gaps in coverage exist in some regions where cruise ships operate. The requested funds will upgrade existing sites with newer, longer range equipment and install additional receiving sites to increase reliability and coverage of the waters upon which cruise ships operate in Alaska waters.

The following graphics show where Marine Exchange vessel tracking receiving stations have been built and are presently in operation (red dots) as well as locations where additional sites will be established with the funds sought (yellow dots).

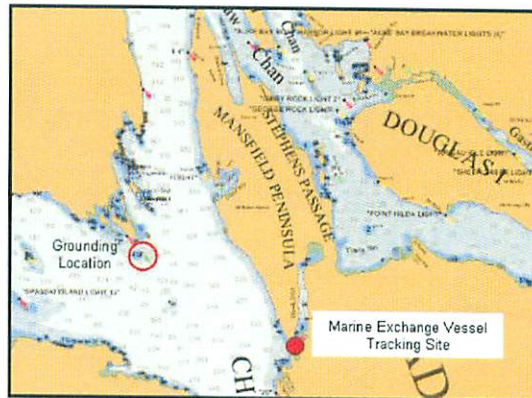


Vessel Tracking Sites in SE Alaska – Present and Planned



Vessel Tracking Sites in Western Alaska – Present and Planned

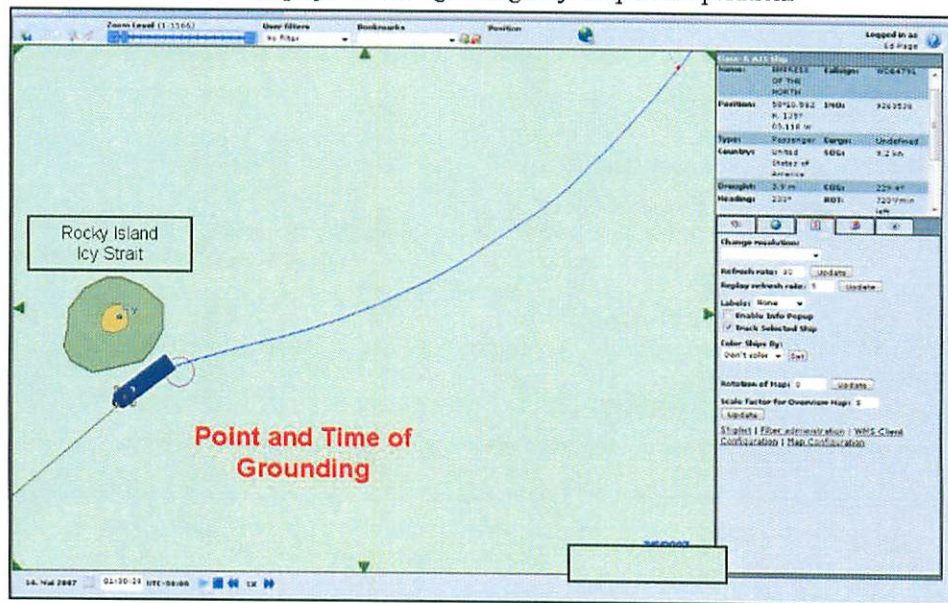
Empress of the North Marine Casualty Icy Strait, Alaska 14 May 2007



Aid Emergency Response as Was Done when Empress of the North Grounded
Coast Guard used MXAK's Vessel Tracking System to locate where the incident occurred and to locate vessels that could render assistance. ADEC used the tracking system to aid their pollution response efforts

Empress of the North Grounding

Accurate information on incident was provided by Marine Exchange's Vessel Tracking System aiding Emergency Response Operations



The above graphic depicts the route of the passenger vessel EMPRESS OF THE NORTH captured by the Marine Exchange's vessel tracking system when the vessel ran aground in 2007 resulting in abandon ship. The vessel tracking system was used by the Coast Guard to locate vessels in the area to assist in the

rescue of crew and passengers as well as used by ADEC and the Coast Guard to conduct the oil spill response and salvage operations.

Costs and Funding:

Approximately 50% of the capital costs of building the existing vessel tracking system are attributable to the establishment of AIS receiving stations, vessel tracking software and an operations center that support cruise ship operations in Alaska. The active tracking of cruise ships while operating in Alaska waters warrants utilization of cruise ship revenues to contribute to the expansion of the vessel tracking system.

The allocation of a portion of Alaska Cruise Ship Head Tax funds to the Marine Exchange for expanding the vessel tracking system to provide better tracking of cruise ships comports to the above criteria. Accordingly the Marine Exchange requests \$450K, which equates to 7% of the overall capital costs of building the system, from these revenues to contribute to the vessel tracking system that is related to cruise ship vessel tracking.

To date this vessel tracking system has been used to aid the response to several serious maritime casualties some of which are noted below:

- The cargo ship *Selendang Ayu* grounding near Dutch Harbor and the follow on search and rescue and oil spill response operations.
- The search for a "man overboard" from a cruise ship sailing in Clarence Strait with the tracking system providing the Coast Guard with the vessel's trackline and probable location of the passenger.
- The grounding and abandon ship of the *Empress of the North* and the follow on emergency response, salvage and oil spill response operations. (As show in the graphics on previous page)

Additionally, the system is used by State agencies to more efficiently and effectively carry out their missions as noted below.

- Department of Environmental Conservation uses the system as follows:
 - To compare the vessels operating in Alaska waters identified the tracking system with the State's listing of vessels that have submitted the required oil spill bonding and spill response plans.to identify non compliant vessels.
 - To aid the agencies response to numerous oil spills and identify the source of mystery spills.
 - To monitor cruise ship operations and the overboard discharges in State waters.

(5) \$40k admin costs

Proposed Bill Language:

\$450,000 in State capital funds from the Cruise Ship Head Tax revenues to the Marine Exchange of Alaska to expand the vessel tracking capabilities that aid safe, secure, efficient and environmentally sound cruise ship operations in Alaska.

**Funding of Marine Exchange of Alaska's
Capital Expansion of Alaska Vessel Tracking System
Vessel Tracking System
March 6, 2009**

Description of Project:

\$450k in State Capital funds is requested to expand the vessel tracking infrastructure used to electronically track cruise ships, AMHS ferries, tankers, cargo vessels, tugs and barges, oil exploration and fishing vessels sailing Alaska waters to aid safe, secure, efficient and environmentally sound maritime operations.

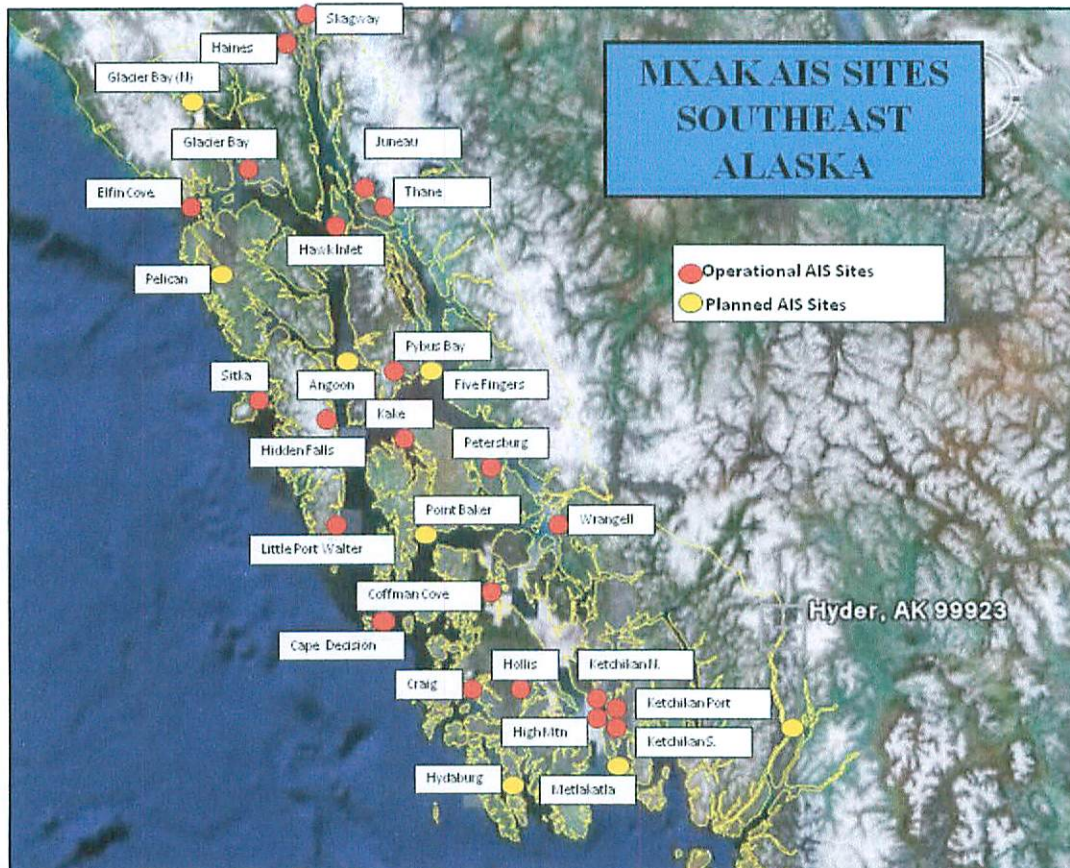
Since 2001, over \$7 million dollars in State, Coast Guard and private marine industry funds have been allocated to build a vessel tracking system operated by the Marine Exchange of Alaska. The system uses both satellite and Automatic Identification System (AIS) to track vessels sailing Alaska waters.

We currently operate and maintain 60 vessel tracking receiving sites extending from Barrow to Adak and south to Ketchikan. A variety of private and government agencies pay for the communications and operating costs of our system which is now manned on a 24X7 basis.

The requested \$450k of State funds are sought to expand the number of vessel tracking receiving sites to gapped coverage areas in Southeast Alaska, the Aleutians, Western Alaska and the Arctic. It is envisioned over 150 AIS sites will be needed to provide comprehensive coverage of Alaska coastal waters. The requested funds will result in the build out of 20 additional AIS receiving sites providing coverage of some of the more challenging and high trafficked vessel operating areas.



*Marine Exchange Vessel Tracking System AIS Receiving Sites – Planned and Operational
Western Alaska*



Marine Exchange Vessel Tracking System AIS Receiving Sites – Planned and Operational Southeast Alaska

Presently, access to the vessel tracking system is provided to several State agencies to aid their effective and efficient execution of their missions.

The vessel tracking system is used by the Coast Guard, the marine industry and State agencies to more efficiently and effectively carry out their missions as noted below.

- Department of Environmental Conservation uses the system as follows:
 - To compare the vessels operating in Alaska waters identified the tracking system with the State's listing of vessels that have submitted the required oil spill bonding and spill response plans, aiding their ability to identify non compliant vessels.
 - To aid the agency's response to oil spills and identify the source of mystery spills.
 - To monitor cruise ship operations and the overboard discharges in State waters.

- Department of Transportation uses the system to track the locations of AMHS ferries to aid efficiency and emergency response, i.e. Le Conte and Lituya groundings.
- DMVA uses the system to monitor vessel traffic with respect to vessel security and most recently vessels operating near volcanic operations to address emergency services.
- Department of Commerce uses the system to provide oversight and monitoring of state pilotage regulations.
- Department of Fish and Game uses the system to track some of their vessels which also serve as part of the safety net for vessels in distress;

The expansion, maintenance and replacement of the Marine Exchange's Vessel Tracking System equipment will continue to aid safe, secure, efficient and environmentally sound maritime operations as noted below.

- **Safety:** The safety of maritime operations will be aided by the information provided by the expanded tracking system that is used by the Coast Guard to conduct emergency response operations, locating vessels in distress and vessels that are nearby able to assist.
- **Environmental Protection:** The system can aid validation of compliance with various environmental regulations, including overboard discharges and the reduced speed transits in areas where whales are present and ensuring safe distance from protected areas. Additionally, the system aid the response to oil spills by tracking resources and monitor changes in vessel traffic activity in the Arctic regions of Alaska.
- **Security:** The system provides information that aids DMVA and the Coast Guard in the execution of their security missions directed at protecting cruise ships, tankers, ferries and other vessels, such as in providing escorts.
- **Efficiency:** The system is able to provide information to pilots, tug operators and others supporting vessel operations to aid the efficiency of operations.

Allocation of Funds: The requested funds will be expended as follows:

- (1) \$200k for AIS vessel tracking hardware (receivers, power systems, communications systems)
- (2) \$120k for personnel and contractors installing and upgrading AIS network
- (3) \$60k for travel and shipping costs to new AIS locations

(4) \$50k software improvements

(5) \$40k admin costs

Bill Language: Allocation of \$450k in capital funds to the Marine Exchange of Alaska to expand the number of vessel tracking Automatic Identification Stations (AIS) in Alaska to aid safe, secure, efficient and environmentally sound maritime operations.